# CONTENTS OF VOLUME 28

*Volume 28 No. 1 October 1993*


HSIANG-TE KUNG, LONG GEN YING, and YOU-CI LIU / Fuzzy Clustering Analysis in Environmental Impact Assessment – A Complement Tool to Environmental Quality Index 1

YOGESH KUMAR and GARY BYRTUS / Monitoring of Methoxychlor Residues in the Athabasca River System in Northern Alberta After Treatment for Control of Black Fly Larval Populations 15

RICHARD COOK, SAIED MOSTAGHIMI, and JOHN C. PARKER / Estimating Oil Spill Characteristics from Oil Heads in Scattered Monitoring Wells 33

PAUL F. HUDAK / Optimizing Environmental Monitoring Networks with Direction-Dependent Distance Thresholds 53

PHILIP D. KIRKITSOS and DENIS SIKIOTIS / Chemical Composition of the $NH_3$-$HNO_3$-$H_2SO_4$-NaCl System in the Atmosphere of Athens, Greece 61

A. DENNIS LEMLY / Guidelines for Evaluating Selenium Data From Aquatic Monitoring and Assessment Studies 83


*Volume 28 No. 2 November 1993*


N. PEERZADA, A. PADOVAN, and M. GUINEA / Concentrations of Heavy Metals in Oysters from the Coastline of Northern Territory, Australia 101

HEIDI M. LOTT and STEVEN A. BARKER / Comparison of a Matrix Solid Phase Dispersion and a Classical Extraction Method for the Determination of Chlorinated Pesticides in Fish Muscle 109

ALENA MUDROCH / Lake Ontario Sediments in Montoring Pollution 117

N. B. R. K. VENUGOPAL and S. L. N. REDDY / *In Vivo* Effects of Trivalent and Hexavalent Chromium on Renal and Hepatic Atpases of a Freshwater Teleost *Anabas Scandens* 131

SAMUEL E. KAKULU / Biological Monitoring of Atmospheric Trace Metal Deposition in North-Eastern Nigeria 137

P. H. DOWSON, J. M. BUBB, and J. N. LESTER / Depositional Profiles and Relationships Between Organotin Compounds in Freshwater and Estuarine Sediment Cores 145

MICHAEL GOCHFELD and JOANNA BURGER / Evolutionary Consequences for Ecological Risk Assessment and Management 161

B. N. NOLLER, H. BLOOM†, R. D. DINEEN, M. G. JOHNSON, and R. P. HAMMOND / Effective Monitoring of Pollution By Toxic Trace Elements in Waters, Sediment and Biota of the Derwent River Estuary, Tasmania, Through Long-Term Retention of Analytical Facilities 169

MARKUS NEUMANN / Forest Damage Assessments in Austria 183

JOANNA BURGER, SUSAN SEYBOLDT, NEIL MORGANSTEIN, and KATHLEEN CLARK / Heavy Metals and Selenium in Feathers of Tree Shorebird Species From Delaware Bay 189

Announcements 199, 200

*Volume 28 No. 3 December 1993*

OLLI VARIS, BJØRN KLØVE, and JUHANI KETTUNEN / Evaluation of a Real-Time Monitoring System for River Quality – A Trade-Off Between Risk Attitudes, Costs, and Uncertainty 201

OTTO HÄNNINEN, JUHANI RUUSKANEN, and JARI OKSANEN / A Method for Facilitating the Use of Algae Growing on Tree Trunks as Bioindicators of Air Quality 215

F. OWEN HOFFMAN, B. GORDON BLAYBLOCK, MARILYN L. FRANK, and KATHLEEN M. THIESSEN / A Risk-Based Screening Approach for Prioritizing Contaminants and Exposure Pathways at Superfund Sites 221

ROY PÖLLÄNEN / Studies of the Possibility of Measuring Changes in Environmental Pollution with the PIXE Method Using Moths as a Monitor 239

PETER H. BECKER, ROBERT W. FURNESS, and DIANA HENNING / The Value of Chick Feathers to Assess Spatial and Interspecific Variation in the Mercury Contamination of Seabirds 255

M. L. OTTE and A.H.B.M. WIJTE / Environmental Variation Between Habitats and Uptake of Heavy Metals by *Urtica Dioica* 263

F. A. VERTUCCI and J. M. EILERS / Issues in Monitoring Wilderness Lake Chemistry: A Case Study in the Sawtooth Mountains, Idaho 277

Announcement 295

Information for Authors 297

Author Index of Volume 28 299

Contents of Volume 28 301